



भारतीय कृषि एवं खाद्य परिषद्
INDIAN CHAMBER OF FOOD AND AGRICULTURE

POLICY ROUND TABLE ON DIGITAL AGRICULTURE

Tuesday, 28th May 2024

India International Centre, Lodi Estate, New Delhi

POST EVENT REPORT



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POLICY ROUND TABLE ON DIGITAL AGRICULTURE

Date: 28th May 2024 | Venue: India International Centre, Lodi Estate, New Delhi

Indian Chamber of Food and Agriculture hosted a policy round table on Digital Agriculture on 28th May 2024 in New Delhi. The event brought together key stakeholders, experts, and policymakers from the agricultural sector to discuss critical issues concerning crop protection. The discussions focused on addressing the use of advanced technologies such as IoT, AI, big data, drones, and blockchain to optimize agricultural practices. The meeting was chaired by Shri Tarun Shridhar, Former Secretary - Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.



WELCOME AND OPENING STATEMENTS

Dr. MJ Khan, Chairman ICFA welcomed all the dignitaries and opened the session by emphasizing on the transformative potential of digital technologies in revolutionizing the agricultural sector. He highlighted the critical role that innovations such as IoT, AI, big data, drones can play in optimizing agricultural practices, enhancing productivity, and ensuring sustainable crop protection, also expressed his gratitude to the distinguished participants, including key stakeholders, experts, and policymakers, for their commitment to advancing digital agriculture in India. Dr. Khan's welcome note set a collaborative tone for the event, underscoring the importance of collective efforts in addressing the challenges and opportunities in modern agriculture.

Shri Tarun Shridhar, Former Secretary - Ministry of Fisheries, Animal Husbandry and Dairying, Government of India highlighted that precision farming is necessary and how it is enabled by advanced technologies like IoT, AI, drones, and big data, is crucial for maximizing efficiency and productivity while minimizing resource use and environmental impact. He pointed out that precision farming techniques can help agricultural practices to the specific needs of each crop and soil type, thereby enhancing yields and reducing costs. He discussed the importance of blockchain in ensuring transparency and traceability in the food supply chain, which can build trust and improve market access for farmers.

Prof M. Moni, Former DG NIC addressed the policy dimensions of digital agriculture, emphasizing its critical importance in the current era. Prof. Moni highlighted the need for robust policies that support the integration of advanced technologies such as IoT, AI, big data, and blockchain into farming practices. He stressed that these technologies can provide real-time data and analytics, which are essential for informed decision-making and efficient resource management. Furthermore, Prof. Moni pointed out that effective policy frameworks are required to facilitate the adoption of precision farming techniques, which can significantly enhance productivity and sustainability. He also underscored the importance of government support in providing infrastructure, training, and financial incentives to farmers to embrace these innovations. By creating a conducive policy environment, Prof. Moni argued, India can unlock the full potential of digital agriculture, ensuring food security, improving farmers' livelihoods, and fostering economic growth.



SESSION PROCEEDINGS

Mr. Aneesh Jain, CEO-MD, Gram Unnati focused on the critical need for farmers to be tech-savvy and the importance of making technology easily accessible. He emphasized that raising awareness about existing technological solutions is paramount. Mr. Jain pointed out that many farmers are unaware of the innovations that could significantly improve their farming practices and livelihoods. He stressed that both the government and private sectors should prioritize creating tech-friendly solutions that are easy for farmers to adopt and use. Mr. Jain highlighted the necessity of digital literacy programs to ensure that farmers can effectively utilize these technologies. He called for a concerted effort to disseminate knowledge about digital tools and their benefits through training and support initiatives.

Dr. Madhuri Gupta, CEO, Meerut Udyami Foundation addressed the numerous challenges faced in agriculture and how technology can serve as a vital link in overcoming these obstacles. She emphasized that technological interventions can be pivotal in addressing issues such as low productivity, resource inefficiency, and market access. Dr. Gupta highlighted the importance of developing an integrated ecosystem that leverages technology to provide comprehensive solutions to these challenges. By doing so, the specific needs and constraints of farmers can be better addressed. Dr. Gupta also emphasized the role of self-help groups and other community-based organizations in facilitating the adoption of technology. These groups can act as conduits for knowledge transfer, training, and support, ensuring that technological benefits reach even the smallest and most remote farms.

Mr. Utkarsh Kapoor, CEO & Co Founder, Qboid ioTech highlighted the transformative impact of technology on the dairy sector and the agricultural

market at large. He stressed the importance of raising awareness about how technological innovations can significantly benefit farmers, particularly in improving dairy management and enhancing market access. Mr. Kapoor pointed out that technologies such as IoT devices and data analytics can optimize dairy operations by monitoring animal health, improving milk yield, and ensuring better quality control. He also emphasized the value of learning from successful tech implementations in other countries. By facilitating technology transfer, India can adopt best practices and advanced solutions that have been proven effective elsewhere. Mr. Kapoor discussed the challenges faced by the agricultural supply chain, including inefficiencies, lack of transparency, and logistical issues.

Ms Bharti Sinha, Director, Amity Software Systems Ltd. emphasized the transformative impact of technology on skill enhancement, process efficiency, and opportunity creation within the agricultural sector. She highlighted how digitalization can automate various agricultural processes, ensuring greater accuracy and reliability. By integrating advanced technologies, farmers can streamline their operations, reducing manual labor and minimizing



errors. Ms. Sinha noted that automation technologies have significantly accelerated farming processes, from planting and irrigation to harvesting and post-harvest management. This not only improves productivity but also allows farmers to focus on other critical aspects of their business, such as market expansion and financial planning. She discussed the role of weather technology in agriculture, underscoring its importance in providing accurate weather forecasts and climate data, which are crucial for planning and decision-making. Through the adoption of digital tools and automated systems, the agricultural sector can achieve higher efficiency, better resource management, and increased resilience against climate challenges.

Mr. Navneet Ravikar, Group Chairman, Leadsconnect addressed the critical issue of outdated ground-level data in the agricultural sector. He emphasized that relying on old data hampers effective decision-making and stressed the need for up-to-date resources to provide current and accurate information. Mr. Ravikar pointed out that the backlog in technology adoption and data validation processes further complicates the situation, highlighting the problem of ensuring the accuracy and relevance of available data. He noted that while many GIS companies provide data, there is a significant need for a dedicated group to validate this information to ensure its reliability. In the



context of dairy farming, Mr. Ravikar remarked that digital agriculture has not yet reached its full potential. The implementation of advanced data-driven technologies is crucial for optimizing dairy operations, from managing livestock health to improving milk production. He called for collaborative efforts to establish robust data validation mechanisms and promote the adoption of modern technologies across the agricultural landscape. By doing so, farmers can make more informed decisions, leading to better outcomes and increased sustainability in both crop and dairy farming.

Mr. Amit Tuteja, Founder, Connecting Dream Foundation emphasized the importance of digitalization at the grassroots level and its implementation strategies. He highlighted the critical role of engaging youth in agriculture to



address the challenges of the next generation. Mr. Tuteja pointed out that attracting young talent to the agricultural sector is essential for its modernization and long-term sustainability. Mr. Tuteja discussed how the right tools and technologies, when properly implemented, can address pressing issues such as productivity, resource management, and market access. By integrating advanced digital solutions, agriculture can become a more viable and attractive career option for young people. By focusing on the right tools and technologies, digitalization can transform agriculture, making it more efficient,

sustainable, and future-ready.

Mr. Nirav Sheth, CEO, Kathyawad Ventures emphasized the pivotal role of farmers and the need to place them at the center of agricultural development efforts. He advocated for creating platforms that bridge the communication gap between farmers, stakeholders, and technology providers. Mr. Sheth stressed that farmers require facilitation more than just information, and empowering them should be the primary focus. He discussed the integration of AI (Artificial Intelligence) and IoT (Internet of Things) into agricultural operations, highlighting how these technologies can revolutionize farming practices. Mr. Sheth specifically addressed the challenges faced by tribal communities in practicing agriculture and emphasized the importance of creating a value chain that incorporates their needs and capabilities. Furthermore, Mr. Sheth outlined how digital agriculture can enhance food security by improving productivity, reducing labor-intensive tasks, and increasing income for farmers. He emphasized that the adoption of digital tools and technologies can lead to a significant improvement in the quality of life for farmers, as well as contribute to sustainable agricultural practices. By keeping farmers at the forefront and leveraging innovative solutions, digital agriculture can drive positive change across the entire food value chain.

Ms Shalini Singh, Project Director, CDAC emphasized the necessity of robust data to understand and address the challenges faced by farmers at the grassroots level. She highlighted that accurate and comprehensive data is crucial for identifying the specific problems farmers encounter, allowing for targeted and effective solutions. Ms. Singh stressed that without a solid data foundation, efforts to transform agriculture through digital means would be less impactful. She also mentioned



that a robust data infrastructure can facilitate better resource management, optimize supply chains, and ensure that farmers receive timely and relevant information. She called for collaborative efforts to build and maintain a comprehensive agricultural data ecosystem, which is essential for driving sustainable growth and innovation in the sector. By focusing on data-driven strategies, digital transformation can significantly uplift the agricultural landscape, benefiting farmers and the broader economy.

Dr. Madhukant Patel, from ReveSoils Private Ltd and Reveautomation LLP emphasized the vital role of startups in driving innovation at the grassroots level in agriculture. He highlighted how startups are uniquely positioned to develop and deploy cutting-edge technologies that can directly benefit small-scale farmers. By focusing on remote sensing and data analytics, startups can provide valuable insights that help farmers make informed decisions. Mr. Lakhnupal also addressed the critical issue of data



privacy, stressing the importance of safeguarding farmers' data from unauthorized access and misuse. He pointed out that while the volume of agricultural data is vast, the focus should be on extracting and utilizing only the most useful data. This involves pre-processing and cleaning data to ensure its accuracy and relevance. He emphasized that clean, high-quality data is essential for making reliable predictions and forecasts, which can significantly enhance agricultural planning and productivity.

Mr. Rahul Lakhnopal, Vice President of TaashaTech Infosolution Pvt Ltd, highlighted the importance of integrating advanced tools to enhance data management in agriculture. He emphasized that high-quality data and robust data governance are fundamental for achieving reliable insights and effective decision-making. Dr. Patel pointed out that integrating various technological tools can streamline data collection, processing, and analysis, leading to more accurate and actionable information. He discussed how improved data

quality ensures that farmers receive precise recommendations, which can optimize agricultural practices and boost productivity. Dr. Patel also stressed the importance of establishing strong data governance frameworks to maintain data integrity, security, and privacy. By implementing these frameworks, stakeholders can ensure that the data used in agricultural applications is both trustworthy and compliant with relevant regulations. He called for continuous innovation and collaboration among technology providers, researchers, and policymakers to create a comprehensive ecosystem that supports sustainable and efficient farming practices. By focusing on data quality and governance, the agricultural sector can unlock the full potential of digital technologies, ultimately benefiting farmers and the wider community.

CONCLUDING REMARKS

Mr. Vishnu Chandra, Advisor for GeoICT & Spatial Planning at the Ministry of Panchayati Raj, emphasized the critical importance of availability and accessibility in digital agriculture. He highlighted the existence of various data applications that provide valuable agricultural insights and emphasized the need to continuously update maps to reflect the evolving agricultural landscape accurately. Mr. Chandra mentioned Agristacks as a comprehensive platform that serves as a vast repository of agricultural data, facilitating vulnerability mapping and precise surveys. He discussed the significance of precision surveying and mapping techniques, such as those offered by CROS (Continuously Operating Reference Stations) developed by Survey of India. These licensed surveying tools ensure the accuracy and reliability of agricultural data, enabling informed decision-making and efficient resource management. Furthermore, Mr. Chandra underscored the importance of licensed surveying practices to maintain data integrity and uphold regulatory standards. He stressed the need for collaborative efforts among government agencies, technology providers, and stakeholders to leverage digital tools effectively in agriculture. By focusing on data accessibility, accuracy, and licensing, digital agriculture can achieve its full potential in driving sustainable growth and development in rural areas.

Shri DC Misra, Former Deputy Director General at the Ministry of Electronics and Information Technology (MeitY), highlighted the transformative power of technology in providing solutions across various aspects of agriculture. He emphasized the importance of soil technology, including geo-referencing with latitude and longitude coordinates, as essential components in addressing agricultural



challenges effectively. Mr. Misra stressed the need for a robust ecosystem that incorporates these technological advancements to overcome difficulties faced by farmers. He discussed how soil technology, coupled with precise geo-referencing, enables farmers to make informed decisions regarding soil health, irrigation, and crop management. This information can be crucial in optimizing resource utilization and improving yields. Furthermore, Mr. Misra underscored the significance of creating an inclusive ecosystem where stakeholders, including farmers, researchers, and technology providers, collaborate to harness the full potential of these technologies. By leveraging soil tech and geo-referencing, agriculture can move towards more data-driven and sustainable practices, benefiting both farmers and the agricultural sector as a whole.

Mr. Dushyant K Tyagi, CEO, Farmgate Technologies emphasized how digitalization enhances resource efficiency in agriculture. He discussed strategies to achieve greater environmental sustainability, focusing on aspects such as data quality, data assurance, and data governance. Mr. Tyagi highlighted that digital tools and technologies can optimize resource usage in farming, such as water, fertilizers, and pesticides, leading to improved environmental outcomes. He emphasized the

CONCLUDING REMARKS

importance of ensuring high data quality to make informed decisions and implement sustainable practices effectively. Additionally, he stressed the need for data assurance and governance mechanisms to maintain data integrity, security, and privacy in agricultural operations. By prioritizing data quality, assurance, and governance, Mr. Tyagi suggested that the agricultural sector can leverage digitalization to achieve more sustainable and environmentally friendly practices. This approach not only enhances resource efficiency but also contributes to overall environmental conservation and resilience in agriculture.

Prof. M. Moni, Former Director General of the National Informatics Centre (NIC), reiterated the transformative potential of digital technologies in revolutionizing the agricultural sector. He emphasized that digital agriculture is not just a trend but a necessity for ensuring food security, sustainability, and economic prosperity. Prof. Moni highlighted the need for collaborative efforts between government, industry, academia, and farmers to drive digitalization initiatives forward. He stressed the importance of continuous research and innovation to develop tailored solutions that address the unique challenges faced by farmers at the grassroots level. Furthermore, Prof. Moni underscored the role of data governance, privacy, and security in building trust and fostering widespread adoption of digital technologies in agriculture. He encouraged stakeholders to prioritize data quality, assurance, and transparency to unlock the full potential of digital agriculture. In essence, Prof. Moni's concluding remarks emphasized the imperative of embracing digital transformation in agriculture as a strategic imperative for sustainable development and improved livelihoods in rural

communities.

Address by the Chief Guest Sh. Tarun Shridhar, Former Secretary - Ministry of Fisheries, Animal Husbandry and Dairying, Government of India

underscored the importance of a mindset change towards agriculture. He emphasized the need for a positive perception of agriculture as a viable and dignified livelihood option. Shri Shridhar highlighted the role of vocational training and digitalization in empowering farmers with modern skills and tools to enhance productivity and sustainability. He also spoke about the significance of organic farming in promoting environmental conservation and producing healthier food. Shri Shridhar stressed the importance of a synchronized approach in the agricultural value chain, from production to value addition, to maximize returns for farmers and ensure food security for the nation. Furthermore, Shri Shridhar addressed the challenge of static raw data, emphasizing the need for dynamic and real-time data analytics to drive informed decision-making and optimize resource allocation in agriculture. He encouraged collaborative efforts among stakeholders to harness the full potential of digital technologies and sustainable practices for the benefit of farmers and the agricultural sector as a whole.



RECOMMENDATIONS :

- **Improving Data Management** : Developing dynamic data management systems that provide real-time analytics and insights for informed decision-making. Ensuring data quality, assurance, and governance to build trust and facilitate data-driven interventions in agriculture.
- **Supporting Research and Innovation** : Investing in research and development initiatives to develop tailored solutions for the agricultural sector. Fostering collaboration between government, academia, industry, and farmers to drive innovation and technology adoption in agriculture.
- **Policy Support** : Advocate for policy reforms and initiatives that support digital agriculture, organic farming, sustainable practices, and inclusive growth in the agricultural sector.
- **Enhancing Digital Infrastructure** : Investing in robust digital infrastructure, including high-speed internet connectivity, mobile networks, and cloud computing services, to facilitate seamless data exchange and communication in rural areas.
- **Promoting Digital Literacy** : Launching digital literacy programs targeted at farmers and agricultural stakeholders to enhance their understanding and adoption of digital technologies. Providing training and support for using farm management software, IoT devices, drones, and data analytics tools.
- **Developing Tailored Solutions** : Collaborating with technology providers, startups, and research institutions to develop and customize digital solutions that address specific challenges faced by farmers, such as pest management, soil health monitoring, weather forecasting, and market access.
- **Encouraging Data Sharing** : Establishing platforms and frameworks for data sharing and collaboration among stakeholders, ensuring data privacy, security, and transparency. Encouraging the creation of data pools and repositories for agricultural data to drive innovation and decision-making.
- **Integrating IoT and AI** : Promoting the integration of Internet of Things (IoT) devices and Artificial Intelligence (AI) algorithms for real-time monitoring, predictive analytics, and automation in agriculture. Implementing smart sensors, drones, and automated machinery to optimize resource utilization and improve productivity.
- **Monitoring Impact and Evaluation** : Continuously monitor and evaluate the impact of digital agriculture interventions on farmer livelihoods, productivity, sustainability, and food security. Using data-driven insights to refine strategies, allocate resources effectively, and scale up successful initiatives.



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